R E M A R K S

This paper accompanies a Request for Continued Examination and is responsive to the Office action mailed on June 21, 2006. Claims 1, 6, and 8 through 21 were presented for examination and were rejected. Claim 1 has been amended.

The applicants respectfully submit that the claims as amended overcome the objection and rejections, and the applicants request reconsideration in light of the following comments.

Claim Objection

Claim 1 was objected to for the incorrect spelling of "polyolefin." Additionally, the phrase "copolymers of different olefins" was deemed to be misleading.

Claim 1 has been amended to correct the inadvertent typographical error and to clarify the misleading wording in the claims language. The applicants respectfully submit that claim 1, as amended, overcomes the objection.

35 U.S.C. 103 Rejection of Claims 1, 6, 8-21 (first of two rejections)

Claims 1, 6, and 8 through 21 were rejected under 35 U.S.C. 103(a) as being unpatentable over S. Lee, KR 9204784 B, published June 15, 1992 (hereinafter "S. Lee") in view of Kojima et al., U.S. Patent 5,338,780, issued August 16, 1994 (hereinafter "Kojima").

Claim 1 has been rewritten in Jepson format, to define the invention more particularly and distinctly over the prior art. Support for the characterized part of the claim can be found at page 10, line 13 through page 11, line 2 of the specification as filed.

Claim 1, as amended, recites:

> **1.** A tracking resistant resin composition comprising:
>
> 100 weight parts of at least one resin selected from a group consisting of polyolefins and olefin copolymers;
>
> 0.3 to 1.0 weight parts of a carbon black;
>
> 0.1 to 2 weight parts of a UV and light stabilizer; and
>
> 0.1 to 2 weight parts of an antioxidant,
>
> wherein said polyolefins may be LDPE (low density polyethylene), MDPE (middle density polyethylene), or HDPE (high density polyethylene)

> which have a melt index of 0.1 to 1.0g/10min,
>
> characterized in that *the carbon black has an average particle size of 60 nm or less, a surface area of 80 to 200 m^2/g, and a dibutyl acrylate adsorption of 100 to 200 $cm^3/100g$*.
>
> (*emphasis supplied*)

Nowhere does S. Lee or Kojima teach or suggest, alone or in combination with each other, what claim 1 recites – namely that the carbon black has an average particle size of 60 nm or less, a surface area of 80 to 200 m^2/g, and a dibutyl acrylate adsorption of 100 to 200 $cm^3/100g$. For example, neither S. Lee nor Kojima ever even mentions carbon black that has a dibutyl acrylate adsorption of 100 to 200 $cm^3/100g$. For these reasons, the applicants respectfully submit that the rejection of claim 1 is overcome.

Because claims 6 and 8 through 21 depend on claim 1, the applicants respectfully submit that the rejection of these claims is also overcome.

35 U.S.C. 103 Rejection of Claims 1, 6, 8-21 (second of two rejections)

Claims 1, 6, and 8 through 21 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima et al., U.S. Patent 5,338,780, issued August 16, 1994 (hereinafter "Kojima") in view of C.D. Lee, U.S. Patent 6,197,852, issued March 6, 2001 (hereinafter "C.D. Lee"). The applicants respectfully submit that the claims, as amended, overcome the rejection.

Referring to amended claim 1 (presented above), nowhere does Kojima or C.D. Lee teach or suggest, alone or in combination with each other, what claim 1 recites – namely that the carbon black has an average particle size of 60 nm or less, a surface area of 80 to 200 m^2/g, and a dibutyl acrylate adsorption of 100 to 200 $cm^3/100g$.

First, a brief review of the references is provided here. Kojima has an objective to provide stability against thermal oxidation. C.D. Lee has an objective to provide a cross-linked black resin composition for insulating outdoor cable. The characteristics of the carbon black in claim 1, meanwhile, are essential for achieving the resistance against tracking as described in the instant application and are not disclosed in the cited references.

With respect to the average particle size, although carbon black having an average particle size of 10 to 60nm is disclosed in C.D. Lee, it is used not to achieve the tracking resistance of cable (as in the present invention), but to develop the black color with effective dispersion in the resin. It is important to understand this difference in the spirit of the inventions between what is disclosed in the instant application and what is disclosed in C.D.

Lee, in order to understand the presence of the further limitations in claim 1 of the instant application, which limitations are now described.

Going beyond what is disclosed in C.D. Lee, in order to accomplish the tracking resistance of cable, the present invention requires the further restriction of the carbon black—that is, a surface area of 80 to 200 m^2/g and a dibutyl acrylate adsorption of 100 to 200 $m^3/100g$. With respect to the surface area, it is recognized, as the Examiner states in the pending Office action, that "the surface area and particle size are related." However, whether the particles of C.D. Lee with an average particle size in the range of 10 to 60nm satisfy the specific limitations according to the present invention—that is, a surface area of 80 to 200 m^2/g, along with a dibutyl acrylate adsorption of 100 to 200 $m^3/100g$—is not obvious to one of ordinary skill in the art. In other words, C.D. Lee neither teaches nor suggests that one can infer a surface area of 80 to 200 m^2/g if one uses an average particle size of 60 nm or less.

With respect to the Examiner's comments in the "Response to Arguments" section in the pending Office action, the applicants would like to point out that according to Kojima (column 2, line 59-63), "if the amount of carbon black is over 10w/w%, then there may tend to be a loss in the mechanical strength." Furthermore, Kojima teaches an average particle diameter of 30μm or less. Although Kojima does not disclose a lower limit, it is known that the range of the amount of carbon black in which there tends not to be a loss in the mechanical strength is related to the particle size. And since the 30μm upper limit is a much higher number than the 60nm size taught in C.D. Lee, when considering the different roles of the carbon black particles in the different compositions of Kojima and C.D. Lee, the physical and chemical effects—such as mechanical properties, density increase, absorption rate of moisture, *etc.*—that are caused by the differences in the carbon black particle sizes between 30 μm and 60nm vary significantly. Therefore, it would not have been obvious to one of ordinary skill in the art to include the carbon black particle sizes of 10-60nm of C.D. Lee in the compositions of Kojima. Finally, as discussed above with respect to the first rejection, Kojima never mentions carbon black that has a dibutyl acrylate adsorption of 100 to 200 $cm^3/100g$, and neither does C.D. Lee.

For these reasons, the applicants respectfully submit that the rejection of claim 1 is overcome. Because claims 6 and 8 through 21 depend on claim 1, the applicants respectfully submit that the rejection of these claims is also overcome.

Request for Reconsideration Pursuant to 37 C.F.R. 1.111

Having responded to each and every ground for objection and rejection in the Office action mailed June 21, 2006, applicants request reconsideration of the instant application pursuant to 37 CFR 1.111 and request that the Examiner allow all of the pending claims and pass the application to issue.

Should there remain unresolved issues the applicants respectfully request that Examiner telephone the applicants' attorney at 732-578-0103 x11 so that those issues can be resolved as quickly as possible.

Respectfully,
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